TECHNICAL BOOK REVIEW INDEX

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JULIA C. WALLACE, *Editor*

Volume 14 **June, 1948** **Number 6**

THE purpose of the Technical Book Review Index is primarily to identify reviews in current scientific, technical, and trade journals; secondarily, when feasible, to quote from these reviews. In the evaluation of scientific and technical books, reviews constitute the best existing source of information. The service of the Technical Book Review Index is thus in the field of evaluation, rather than in competition with existing publications which announce new and forthcoming books, list books by subjects, or supply bibliographic information. Each quotation immediately follows the name of the journal from which it is taken. Obviously, these brief extracts, detached from the context, must not be accepted as conclusive. Except for the correction of obvious errors, the bibliographic information is as given in the reviews. It is, therefore, in many cases incomplete and in some cases probably inaccurate.

Alexander, Jerome. Life, its nature and origin. 291p. 1948. Reinhold, New York, $5.

Paper trade journal, March 11, 1948, p.60. ½ col.

"The purpose of the book is to present in coherent order sufficient facts regarding material biological phenomena to show that life is dominated by catalysis—the direction of chemical charge by surface areas of specific structure and efficiency. Each topic is treated in an elementary manner and can be easily followed by the general reader. It also offers facts that will appeal to the more advanced student. Among the subjects covered are How Did Life Originate?, The Smallest Particles of Matter, How Molecules Make Masses, What are Living Units?, Catalysis, the Guide of Life, Genetics: The Heritable Transmission of Catalysts, Some Catalytic Aspects of Disease and Drugs, Philosophy, the Guide of Mental Life."

Science, May 14, 1948, p.509. ⅝ col.

"Dr. Alexander's book, though by no means an original contribution to the subject, is full of the most interesting and chemically recondite facts and theories. Expert and general reader alike will find the book both readable and informative . . . Dr. Alexander's book has its faults, it sometimes wanders and the reader wonders, but . . . it is a book very well worth reading." *M. F. Ashley Montagu.*

Soil science, May 1948, p.426. ⅓ p.

"A book on science in relation to living things, but . . . also contains a good bit of philosophy in relation thereto . . . The book is rich in references to a great variety of observations made by other scientists that add much of interest and make it evident that the author has a wide acquaintance with the whole field of science in relation to the subject under discussion. The chapter on impurities is of special interest to those dealing with plant and animal nutrition."

Allcut, E. A. Principles of industrial management. Ed.4. 308p. 1947. Pitman, New York, $4.

Industry and power, Feb. 1948, p.114. ¼ col.

"Factual data concerning the basic principles of industrial administration are presented . . . Although . . . written for use as a student's text-book, those engaged in the engineering profession will find the text a helpful guide and introduction to the general principles of business management. The author is a well-known engineer and educator, and presents the information in an easy-to-comprehend manner."

Pulp & paper magazine of Canada, April 1948, p.178. ½ col.

"Covers a wide field. There are chapters on the principles of management, organization, reports, designing and drafting, purchasing, budgets and other production matters, and also consideration of the principles of motion and time study, the payment of labour and industrial relations and personnel . . . While the work was designated primarily for the use of students, it should also be helpful to persons in industry who desire a general knowledge of the main principles underlying management. Considerable new material has been added . . . and there has been no change from the original plan of compressing as much information as possible into one small volume."

Allen, J. Scale models in hydraulic engineering. 407p. 1947. Longmans, New York, 50s.

Commonwealth engineer, March 1, 1948, p.327. 1⅛ col.

"Prof. Allen has a long background of experience in his subject, and can speak with knowledge and authority. The book covers the whole range of hydraulic model work but with particular emphasis on models of tidal rivers and estuaries . . . The whole book can only be summed up as excellent. The treatment throughout is clear and practical. The general production is first-class, the type and figures are clear, and there is a notable absence of typographical errors. The author and publishers are to be congratulated upon producing an outstanding technical book which no hydraulic engineer can afford to overlook."

Arguimbau, Lawrence B. Vacuum-tube circuits. 668p. 1948. Wiley, New York, $6.

Electrical world, April 10, 1948, p.191. ⅛ col.

"Focus here is, as implied, on the circuits rather than on the tubes. However, the tube characteristics are correlated with the circuit characteristics so that one can derive an adequate understanding of the reasons why particular combinations of capacitors, resistors and inductors are required to achieve desired performance. Particular stress is placed on the method of reasoning by which the values are fixed. With this established the author goes on to analyze power amplification, feedback, sidebands, frequency multipliers, oscillators, intermediate frequency amplification, AVC, frequency modulation, interference and regeneration. Closing chapters deal with pulses, television, microwaves and Klystrons."

Professional engineer, March 1948, p.28. ⅖ col.

"Professor Arguimbau has developed a reference book that will be valuable to students, practicing engineers and researchists. His own background has made it possible for him to understand the needs of the type of readers who will use this book . . . For the novice there is enough material on fundamentals of electronics to make the more advanced sections of the text understandable. Emphasis, however, is on such recent developments as frequency modulation and generation of microwaves. Other features which will arouse interest are sections dealing with inverse feedback, video-amplifier transients, pulses and television. Abundance of illustrative material and problems."

Ashbrook, Frank G. Fur farming for profit. Revised and reset. 429p. 1948. Judd, New Yórk, $4.

Nature magazine, March 1948, p.165. ¼ col.

"Originally published by Macmillan in 1928. Twenty years have seen great advances in the knowledge of techniques of farm raising of fur animals. Today this industry offers great hope of relieving the drain upon the numbers of our wild-trapped furbearers, as well as mitigating the obvious cruelties of the steel trap. The author writes with a quarter-century of background in the field of fur farming, and has had a great deal to do with guiding and stimulating an infant industry to its present considerable position today. This book is certainly a 'must' for any beginner, or for anyone working in the field of fur animal management."

Avery, George S., jr., and others. Hormones and horticulture. 260p. 1947. McGraw, New York, $4.50.

Botanical gazette, March 1948, p.360. 1⅓ col.

"In addition to a brief historical survey, there are chapters dealing with the rooting of cuttings, control of preharvest drop of fruits, the setting of fruits with or without pollination, treating of seeds, weed control, prolonging and inducing dormancy, and miscellaneous growth phenomena. There are also chapters on the use of certain chemicals not regarded as hormones by the authors, in thinning of blossoms on trees, breaking dormancy, and the production of new varieties. The illustrations are numerous, clear cut, and meaningful. There are a number of tables and lists of plants, presenting a wide array of experimental data . . . Each chapter has a summation of much of the pertinent literature referring to the subject matter it treats. There are author and subject indexes. As a whole, the book is very valuable in bringing together some of the many contributions made in this field to date." *E. J. Kraus.*

Bachman, Charles H. Techniques in experimental electronics. 252p. 1948. Wiley, New York, $3.50.

Electrical digest, March 1948, p.62. ⅓ col.

"The author has gathered together a great deal of the available information in experimental electronics previously unattainable except by contact with laboratory workers. The discussions are carefully organized so that only those subjects which come under the precise definition of electronics are considered. The material covered is particularly concerned with controlled beams of charged particles in vacua, or at low pressures rather than the conduction of electricity in gases. Valuable information is provided on such topics as methods of applying and using fluorescent materials, cathode coatings, tungsten characteristics and vacuum glass blowing techniques. There is an interesting chapter on controls."

Electronic industries & electronic instrumentation, March 1948, p.28. 8 l.

"Phases of experimental electronics concerned with methods for constructing and evacuating electron tubes, those using controlled beam methods of applying and using fluorescent materials, cathode coatings, tungsten characteristics, and vacuum glass blowing technics are covered. The electron microscope is also described."

Electronics, June 1948, p.247. ⅝ col.

"As a comprehensive discussion of the subject, the book is especially valuable for the specific mentions of materials and equipment that have proved suitable under various conditions. The treatment is well adapted to the needs of the beginning experimenter concerned with simple vacuum and electronic problems, such as the graduate student. It should be supplemented with works on the theory of gases and electronics, naturally . . . A utilitarian manual." *F. H. R.*

Science, May 14, 1948, p.513. ⅘ col.

"A very good handbook of high-vacuum techniques and of the laboratory arts useful to those who build experimental electron tubes and related electron and ion systems . . . Fresh, concise, and coherent, but limited in scope." *Otto H. Schmitt.*

Barrett, Charles. Australian bird life. 239p. 1948. Oxford, New York, $3.25.

Nature magazine, April 1948, p.171. 7 l.

"Not a field guide to Australian birds, but a popular and readable discussion of the continent's avian life. Nearly seven hundred species have been recorded for Australia, and these contain birds of outstanding beauty of plumage, as well as birds of unique habits of life."

Barrett, Thomas J. Harnessing the earthworm. 179p. 1948. Humphries, Boston, $2.50.

Nature magazine, March 1948, p.165. ½ col.

"The story of the earthworm in Nature, of what has been learned about it in the past, and what has been brought forth in scientific literature. Then the author proceeds to an evaluation of the earthworm's contribution to soil fertility and, therefore, to prosperity. Having developed all of these points, and, it seems to us, demonstrated the importance of this

humble laborer, Dr. Barrett provides practical information on earthworm culture. And he concludes his discussion with the assertion that the earthworm is the most important animal in the world, and with the assurance that if you wish to build topsoil you can do it by feeding earthworms. We believe that this is an important book. We know that it is written against a background of long study and experiment by the author. We have a hunch that this discussion will attract a wide audience. It may stir up some controversy,—which will be healthy —but it cannot fail to stimulate others both to action and to investigation."

Bikerman, Jacob J. Surface chemistry for industrial research. 464p. 1947. Academic Press, New York, $8.

Oil and gas journal, March 4, 1948, p.93. ⅛ col.

"An exposition, adapted to industrial research, of the fundamentals of surface science. Compared with textbooks on pure surface chemistry, it contains less theory, and the theory presented is of the least hypothetical kind . . . Emphasizes the importance of several factors which are often overlooked, such as roughness of solid surfaces and their chemical and physical homogeneity, the miscibility of 'immiscible' liquids, the sensitivity of all sorts of physical quantities to common impurities, and so on . . . Differs from some volumes on applied chemistry of surfaces or colloids in that it does not set out to teach the procedures of any industry . . . Written for people who know what is being done in their plant but want to know why it is done in a certain way and whether it can be done better."

Paper industry and paper world, March 1948, p.1856. ¼ col.

"In the preface the author states that the book does not teach the procedures of any industry; rather it is slanted toward the men who know what is being done in a plant but who would like to know why this is done a certain way and whether it can be done better. The fundamental knowledge contained . . . will, it is hoped, be valuable for such research . . . Deals with surface physics as well as chemistry . . . There are . . . a large number of graphic figures. Each part is concluded with a reference table and the book ends with an extensive subject index."

Bray, John L. Non-ferrous production metallurgy. Ed.2. 587p. 1947. Wiley, New York, $6.

Chemical and engineering news, April 12, 1948, p.1104. ⅝ col.

"Written primarily as a textbook for students of nonferrous metallurgy and is admirably suited for this purpose . . . Brought up to date to include the important developments in this field made during the war, particularly in regard to the metals aluminum, magnesium, nickel, and tin. Also included . . . is a brief chapter on the use of physical chemistry in metallurgical processes, in which a number of practical problems are solved by application of thermodynamic calculations . . . In addition to its principal role [sic] of textbook for colleges, it should prove to be a valuable reference book for practicing metallurgists and engineers because of its systematic and detailed presentation of the subject matter." *Raymond S. Stewart.*

Brewster, Ray Q. Organic chemistry. 840p. 1948. Prentice-Hall, New York, $7.35.

Carnegie technical, April 1948, p.48. ⅞ col.

"The emphasis throughout the book is placed on the explanation of chemical properties and reaction mechanisms in terms of electronic structure . . . The arrangement of material is standard . . . In spite of the fact that the book is written primarily as a text for beginning students, the amount and organization of factual data compares favorably with other works of comparable length. Some footnote references to the standard chemical literature are given, but a more extensive use would enhance the value of the book for reference purposes. More space is devoted to historical background than is usual in organic texts; an interesting innovation is the brief biographical sketches of important chemists which appear in the footnotes. Industrial applications are also given greater prominence than in most elementary texts. On the whole, Dr. Brewster's book represents an important forward step in chemical education . . . Should prove extremely valuable to those teachers who desire to present organic chemistry in terms of present structural theories but who have been forced to use textbooks which followed the classical approach to the subject."

Brown, Hiram, and others. Aluminum and its applications. 338p. 1948. Pitman, New York, $5.75.

Materials & methods, April 1948, p.166. ¼ col.

"Fundamental properties of aluminum alloys and their general usage are set forth in the first eight chapters. The next eight chapters deal with the practical applications of aluminum, written by specialists in the fields of aircraft assemblies, aircraft engines, aircraft castings, automotive manufacture, railroads, marine assemblies, electrical appliances and equipment, and the chemical industries. The present and future of aluminum are dicussed in the last chapter. The alloys are classified, with their distinctive properties and the most recent advances in fabrication stressed. The major alloys, fabricating methods (cast and wrought), finishing, testing, and heat treating are discussed. Well illustrated."

Product engineering, May 1948, p.173. ½ col.

"Practical applications of aluminum and its alloys are described in separate chapters by outstanding authorities in their respective fields . . . The major alloys, both cast and wrought, fabricating methods, finishing, testing, and heat-treating are discussed. Photographs and drawings illustrate the important steps. The distinctive properties of each aluminum alloy are stressed. Definitions are given as they apply to aluminum and are contrasted with those used in steel fabrication . . . Miscellaneous data and information covering the engineering properties of aluminum and its alloys are presented in a nineteen page appendix."

Bump, Gardiner, and others. The ruffed grouse; life history, propagation, management. 915p. 1947. New York State Conservation Dept., Albany, N. Y., $10.

Journal of soil and water conservation, April 1948, p.91. 1 col.

"One of the most complete monographs ever written on a single wildlife species. This

superbly published book is a classic in wildlife literature. It is an exceedingly comprehensive treatise and reports on a painstaking investigation commenced over 16 years ago. Within the handsome red, gold lettered binding, are facts on almost every conceivable question on the habits and characteristics of the 'king' of American upland game birds . . . Written in a pleasing, readable style and regardless of its size . . . you will have an insatiable desire to read the entire account of this remarkable and fascinating study . . . A splendid reference book . . . A 'must' book for wildlife students, game technicians and administrators, foresters, and soil conservationists. Surely it will be used in the schools, especially in the colleges and universities that have courses in wildlife and other natural resource subjects." *C. R. Gutermuth.*

Natural history, March 1948, p.141. 1 col.

"Only a firsthand examination of the volume can reveal the wealth of detail it contains. More than a million records have gone through statistical sorting machines to clarify the data presented in the 186 tables and discussed in the general text . . . There are, admittedly, things still to be learned about the Ruffed Grouse, but the present volume materially reduces the task ahead. Everyone interested in this fine bird will want to have access to this vast fund of data." *John T. Zimmer.*

Cissel, James H. Stress analysis and design of elementary structures. Ed.2, revised and rewritten. 419p. 1948. Wiley, New York, $5.

Concrete, May 1948, p.42. ½ col.

"Covers the principles of structural analysis and design of timber, steel, and concrete structures . . . Part I is maintained substantially as in the first edition. Part II, however, dealing with the design of simple structures, has been entirely rewritten. The material has been rearranged to give current code requirements for floor loads in buildings, a more complete discussion of roof loads, and current live-load requirements for highway bridges and railroad bridges. Thus, the rewritten text includes the most recent changes of the American Iron and Steel Institute, the American Association of State Highway Officials, and the American Railway Engineering Association. Illustrative examples are given of typical solutions of basic problems."

Military engineer, May 1948, p.243. ½ col.

"Presuming that the reader has studied statics and strength of materials, this book is primarily intended to give a working knowledge of fundamental methods in structural design to engineers, architects, and students not specializing in the field . . . The appendix of 50 pages contains enough design data for this text to be used as a handbook for design of simple structures. For a concise treatment of structural principles, this book is recommended." *F. K.*

Collacott, R. A. Refrigeration. 68p. Pitman, London, 6s.

Electrical review, March 12, 1948, p.392. 12 l.

"This useful little primer outlines the principles involved, first differentiating between the compression and absorption systems. Brines and other refrigerants are discussed next, followed by descriptions of various types of compressors, condensers, expansion valves and evaporators . . . Simply written, mainly to explain the functions of the principal working parts; the reasons why some types are preferable to others are briefly indicated. Each of the six chapters includes calculated answers to typical heat-transference questions." *W. O. F.*

Electrician, May 7, 1948, p.1429. ½ col.

"Skilfully as this book is written, the reader who picks it up with no knowledge of the heat cycle or the meaning of 'latent' and 'sensible' heat will find it of little value. With that reservation, however, it can be recommended, particularly to those who foresee the commercial value which the ability to service a refrigerator will possess when times become easier and it becomes a standard item of domestic equipment. Wisely, Mr. Collacott has not attempted to over-simplify and thus destroy the value of his book. It demands, apart from an elementary grasp of heat theory, only the ability to follow a graph and solve a simple equation, and students will find it a useful introduction to a subject which even in electrical engineering circles is not too widely understood . . . Each chapter ends with a set of calculations, the solutions to which are worked out in detail, and the book is illustrated."

Considine, Douglas M. Industrial weighing. 553p. 1948. Reinhold, New York, $10. (Modern library of chemical engineering.)

Modern plastics, April 1948, p.170. 6 l.

"Scale design, construction, and operation are discussed in the first part of this book; the use of scales in such industries as plastics, rubber, textile, food, chemical, mining, and metal is reviewed in part two. As the book is intended for users of scales, a glossary of scale terms is included."

Pulp & paper magazine of Canada, April 1948, p.177. 11 l.

"With weighing so well established as a fundamental industrial operation it is strange that so few books have been published on the subject. This new book then fills a need for literature on the subject and it is primarily intended for users of scales . . . Divided into two parts, namely: Part 1—Scale design, construction, and operation, and Part 2—Scales in industries."

Rubber age, April 1948, p.102. ⅝ col.

"Describes the great advances made in scale engineering in recent years, especially regarding new types of design and wider application of scales throughout industry and commerce . . . Intended particularly for those who use scales, as well as for students, designers and engineers. For maximum convenience and usefulness, the author has divided the book into two parts. Part I treats with scale design, construction and operation, and Part II with scales in industry. The first part is recommended for those who desired a review of basic scale mechanics, of design and construction of modern scales, and of scale installation and maintenance. Part II will prove of more interest to those concerned with the application of scales . . . The chapter on rubber and plastics represents the most comprehensive data available to date on weighing equipment in these fields."

Coryell, Charles D., and others. Science and engineering of nuclear power. 501p. 1947. Addison-Wesley Press, Cambridge, Mass., $7.50.

American journal of science, March 1948, p.186. 1⅔ p.

"Discusses authoritatively — but necessarily within the limits set by security regulations— all aspects of nuclear power . . . Based upon a series of seminars held at the Massachusetts Institute of Technology, beginning in October 1946, and there is to be a second volume. The objective of these publications 'is to present the fundamentals of chain-reacting systems in terms that are understandable to the non-specialist.' We note that some knowledge of modern physics, chemistry and mathematics is assumed, but probably no more than well-trained engineers, metallurgists and geologists possess . . . For those scientists who want to come to grips with the detailed facts about nuclear energy, we strongly recommend that they read 'The Science and Engineering of Nuclear Power'." *W. W. Watson.*

Coward, Katharine H. Biological standardisation of the vitamins. Ed.2. 220p. 1947. Ballière, London, 16s.

Manufacturing chemist, March 1948, p.119. 1⅜ col.

"Essentially a practical book, and the author is well qualified to write it, for she has made original contributions to the study of the determination of most of the vitamins . . . Will be very useful to biologists engaged on vitamin standardisation, especially in view of the large number of examples cited which explain in detail the working out of the results of a particular experiment." *W. C. J. Ross.*

Research, Feb. 1948, p.220. ½ col.

"Represents an invaluable source of information on all practical aspects of the problems facing a worker who wants to undertake a biological estimation of vitamins A, B_1, C, D and E. The chapter on vitamin E is new, and the information about the others has been brought up to date . . . More stress is laid on the principles underlying the planning of the experiments, and the statistical part is treated from a more general aspect than before. Examples illustrating the calculations required to find the errors of individual tests are, however, retained, and should help those readers who are interested only in the application of the statistical methods to one particular problem. Data have been included on the physical and chemical properties of some of the vitamin standards and will prove useful for reference purposes. The chapter on the interdependence of the vitamins has been amplified by new experiments from the author's laboratory." *Marthe Vogt.*

Crossen, George E., & Goldner, K. J. Pharmaceutical preparations. Ed.2. 250p. 1948. Lea, Philadelphia, $4.

Journal of the American Pharmaceutical Association, scientific edition, April 1948, p.172. ⅓ col.

"A concise basic volume for students of pharmacy who have had preliminary training in chemistry and fundamental laboratory techniques and who are ready to consider official pharmaceutical preparations. It is a helpful supplementary outline of the official preparations which should be given in the course of galenical pharmacy in the colleges of pharmacy. The authors have brought this edition into complete accord with the latest editions of the U. S. P. and the N. F."

Culver, Charles A. Theory and applications of electricity and magnetism. 594p. 1947. McGraw, New York, $5.

Electrical review, April 9, 1948, p.557. ⅝ col.

"Intended as an exposition of the fundamental principles in such a way as to lay the foundations also for advanced study . . . A striking feature of the book is the clarity of style and the elegant lay-out. Unlike many electrical text-books, this one is a pleasure to read; the author has concentrated on presenting essentials clearly and succinctly rather than on providing the reader with a wealth of detail. Each chapter carries a set of numerical examples of a relatively easy character. The English reader may possibly find some of the terminology occasionally unfamiliar, but it is scrupulously consistent and in accordance with the latest recommendations of the American Institute of Electrical Engineers . . . Can be strongly recommended to students embarking upon the first year of their degree course, whether their ultimate interests incline towards pure physics or electrical engineering." *F. G. G. A. M.*

Science, Feb. 13, 1948, p.178. 1¼ col.

"A fine book for those who have just completed a first-year course in physics and are yet unprepared to plunge into a course in electricity and magnetism which would prepare them to cope with advanced electricity and magnetism courses such as those based on the material covered in Jean's *Electricity and magnetism,* Smythe's *Static and dynamic electricity,* or similar highly specialized courses in this field. Prof. Culver's book, in its attempt to be comprehensible to the undergraduate, who has had only the first year of physics, avoids the discussion of such basic topics as the solution of the Laplace Equation, the use of images, conformal transformations, and similar topics which must be presented to the senior student if he is to cope with the more advanced courses given in our first-rate universities . . . It falls short as a text for advanced undergraduates." *Z. I. Slawsky.*

Cureton, Thomas Kirk. Physical fitness appraisal and guidance. 566p. 1947. Mosby, St. Louis, $6.

Journal of physical education, Jan.-Feb. 1948, p.63. ¼ col.

"Dr. Cureton has worked closely with the medical profession as well as other allied officials in bringing to the reader a complete understanding of the many ramifications of each separate physical fitness test. The material is quite technical, and is best adapted by the professionally trained physical director; there are numerous illustrations which help visualize the administrative aspects of the many testing programs." *R. U.*

Science, April 16, 1948, p.403. ⅝ col.

"Represents an ambitious and laudable attempt, sponsored by the University of Illinois, to appraise physical fitness and to lay down principles for its improvement. A battery of fitness tests was applied to students entering the University's Colleges of Medicine, Dentistry, and Pharmacy. The techniques and results are presented, and the author, who administered the study, interprets the results and provides hints for the guidance of physical educators." *David B. Dill.*

Cushman, Frank, & Cushman, R. W. Improving supervision; a discussion of human relations problems for supervisors in industrial and business organizations.

232p. 1947. Wiley, New York, $2.50.

Mechanical engineering, April 1948, p.367. 1⅝ col.

"Written in a plain, easily understood style; it is generous in its recommendations to other authors for supplementary reading, and is readily understandable by the man who has risen from the ranks. It is recommended as a reference source for general patterns of good foremanship in many of its chapters. But to characterize it as complete would be false . . . In the preface . . . [the authors] wish the reader to understand that it was written for the purpose of 'making available to all supervisors, ideas which they can apply on their jobs, regardless of the nature of the industry or business in which they are employed.' But unless the average supervisor doubles in brass for the president and executive staff of the company for which he works he can well eliminate a good 25 per cent of the text of the book as something beyond the realm of his authority. For the subject matter to that degree treats with policy as it should be laid down by top management and not as formulas to guide the supervisor in self-improvement." *John R. Bangs.*

Professional engineer, March 1948, p.24. ½ col.

"A follow-up text for foremen and supervisors in connection with training programs . . . The information in this text is applicable to situations common to all types of business. Theme of the text: supervisors are a part of management."

Dalla Valle, Joseph M. Industrial environment and its control. 225p. 1948. Pitman, New York, $4.50.

American journal of public health, May 1948, p.732. ¾ col.

"An authoritative work on industrial hygiene presenting the engineering phases of environmental control in the prevention of occupational hazards, and . . . written principally for engineers . . . Should be read not only by industrial hygiene engineers but also by industrial physicians who need to know the engineering phases of industrial health service and the extent to which the medical service must be backed up by competent engineering if satisfactory results are to be obtained . . . There is an appendix which covers briefly regulations, standards, and desirable practices, including brief statements on medical service, first aid, physical examinations, and record keeping. The author is to be commended on a most worth while book." *A. J. Lanza.*

Factory management and maintenance, March 1948, p.256. 9 l.

"Factors of industrial environment and engineering methods of dealing with control of health hazards are reported. Details regarding dusts, fumes, vapors and gases, psychrometry, thermal environment, and the effect and control of noise and vibration are discussed. Basic principles of air sanitation and collection of airborne material are also covered."

National safety news, April 1948, p.58. ⅔ col.

"About half of the text is concerned with various phases of industrial ventilation and dust collection. The remainder is concerned with a very good short summary of the problem of industrial hygiene and the present trends in the profession and with such environmental factors as temperature, humidity, illumination, radiant energy, noise, vibration, fatigue and air contamination. Such items as discussion of sampling methods, evaluation of dermatitis producing materials and general methods of surveys are properly eliminated as not being within the scope of the work. A discussion of the collection and recovery of solvent vapors might have properly been included." *F. A. Van Atta.*

Davis, Hallowell, and others. Hearing aids; an experimental study of design objectives. 197p. 1947. Harvard Univ. Press, Cambridge, Mass., $2.

Journal of the Acoustical Society of America, May 1948, p.349. ¾ col.

"Records the results of a project which was undertaken at the request of the Office of Scientific Research and Development and of Harvard University . . . The major portion of the report is technical but it is non-mathematical and anyone who is interested in the field of hearing can easily understand it . . . The information which is packed into this volume is of the greatest importance to those specializing in the amelioration of deafness and should be of interest to engineers and technical personnel who devote their energies to the design and development of hearing aids." *Howard A. Carter.*

Science, April 16, 1948, p.403. ¾ col.

"With the development of the miniature vacuum tube and the crystal microphone in the late 1930s, pocket-size hearing aids of relatively wide frequency response and high fidelity became commercially available. In view of these technical advances, it became practicable as well as desirable to ask: 'How nearly should the characteristics of the hearing aid compensate for the detailed deficiencies of the individual impairment?' The report under review proposes an answer to this problem." *Mark B. Gardner.*

Davis, Hallowell, ed. Hearing and deafness; a guide for laymen. 496p. 1947. Rinehart, New York, $5. (Murray Hill Bks.)

Scientific monthly, April 1948, p.355. 1½ col.

"The objective of this volume—to answer the thousand and one questions of the layman about how we hear, the nature of deafness, and what can be done for it, as well as to provide an authoritative guide to all those actively concerned with the problems of the deafened—seems to have been successfully achieved . . . The various organizations for the aurally handicapped and for their vocational guidance are outlined . . . Provides a reliable and much-needed source of information for the deafened, as well as a guide to all those concerned with the alleviation of the disability." *J. R. Lindsay.*

Dickinson, Thomas A. Plastics dictionary. 312p. 1948. Pitman, New York, $5.

Chemical engineering, April 1948, p.302, 304. ⅝ col.

"A compilation of a tremendous amount of data. Chemical engineers who deal with plastics in any form will find it valuable. The appeal is not limited to molders and fabricators. Producers of monomers, plasticizers, and solvents will find it worthwhile. The book covers much more than mere definition of words coined in the plastics industry . . . Like all dictionaries, it is somewhat incomplete. Some of the newer resins are missing. Despite its shortcomings, the dictionary is a valuable addition to the growing bookshelf of the plastics industry." *Roger Williams, jr.*

Materials & methods, April 1948, p.168. ⅛ col.

"Definitions of about 3,500 of the most common terms which will be of practical use both to the plastics expert and the layman are contained in this volume. Basic words and combining forms that will help in the understanding of many uncommon terms that are not defined are given. Tables and charts that provide practical data on catalysts, chemical elements, fillers, pigments, plasticizers, solvents, etc. are included, in alphabetical order. Trade names are also covered. Terminology applicable to British plastics, their manufacturers and trade names is included."

Doig, Peter. Outline of stellar astronomy. 168p. 1947. Hutchinson, London, 10s. 6d.

Sky and telescope, April 1948, p.156. 1⅜ col.

"Twenty years ago a concise and refreshing little volume from the pen of Mr. Doig summarized our knowledge of the sidereal universe. Now its successor has appeared and reflects in many ways the great advances made in stellar astronomy during two decades. Physically the book under review requires about the same number of pages, tables, and appendices as its predecessor to accomplish its aim. It is somewhat unfortunate that the quality of paper available for this edition is not better—the photographs have suffered particularly in reproduction. One may overlook these defects, however, in the enjoyment of the material presented . . . Divided into three parts: I. The Individual Star-Observational Data; II. The Nature of a Star; III. The Stellar Universe . . . Twelve appendices, which give added and more detailed numerical data relative to such things as the period-luminosity relation, the interrelationships of bolometric, absolute, photovisual magnitudes, spectral type characteristics, and so on, conclude the book. One may summarize impressions of this book by the simple ejaculation, 'Excellent reading, an amazing fountain of information'!" *S. W. McCuskey.*

Dover, A. T. Theory and practice of alternating currents. Ed.3, revised and enlarged. 586p. 1947. Pitman, London, 25s. net.

Transactions of the Institute of Marine Engineers, March 1948, p.65. ⅝ col.

"Devoted to general principles, circuits, polyphase systems, non-sinusoidal wave-forms, the magnetization of iron, instruments, measurements, and an elementary treatment of the initial conditions in the simpler electric circuits . . . New chapters have been added dealing with single-phase transformers, three-phase transformers, single-phase and polyphase alternators, three-phase induction motors, transmission circuits, symmetrical components."

Edminster, Frank C. Fish ponds for the farm. 114p. 1947. Scribner, New York, $3.50.

Fertilizer review, March-April 1948, p.15. 11 l.

"This book, written by a conservation expert, furnishes a complete guide for the construction, stocking and managing of productive fish ponds . . . Describes the requirements as to location, soil type, water supply needs, topography and drainage. The problems of stocking and managing for maximum yield of fish together with methods of preventing overstocking are discussed. Specific details are given as to the kind of fertilizer to be used, the time, quantity and frequency of application. Good illustrations are numerous."

Journal of forestry, May 1948, p.393. 1¼ col.

"Not a technical treatise on the engineering and biology of pond management. Instead it is a pleasant, easy-to-understand, profusely illustrated manual of general methods which apply to many ponds over a large region. The author has avoided any obvious attempt to 'sell' landowners on the values of ponds, but throughout the book the reader becomes aware of these values and convinced of their importance in land management . . . Although much of the information presented is available in U. S. D. A. farmers' bulletins and publications of state conservation departments and experiment stations at considerably less cost, the book is a welcome addition to the popular literature on land management because it brings together information from many sources." *William L. Webb.*

Scientific monthly, April 1948, p.354. 1½ col.

"The author . . . reviews the evidence for a knowledge among the ancients of all the basic principles of fish culture, and proceeds to show how in modern times important refinements in the detail of methods have come into use, more especially in the United States since 1930 . . . Mr. Edminster devotes a large part of his book to practical directions for selecting a site for the pond, the many engineering features of its construction and maintenance, and the variety of uses the pond may serve." *E. V. Wilcox.*

Finniecome, J. R. Flow through standard nozzles, orifice plates and venturi tubes. 84p. 1948. Emmott, Manchester, England, 3s. net. (Mechanical world monograph, no.39.)

Iron and coal trades review, April 9, 1948, p.752. ¼ col.

"Fundamental and general formulæ are given together with standard dimensions for measuring devices and discharge coefficients. The compressibility factor for air and steam is considered, followed by short chapters on the ratio of flow factor for an orifice plate to that of a rounded nozzle; the variation of critical pressure ratio with the adiabetic-expansion index and the area ratio; critical flow through a rounded nozzle; theoretical and actual quantities flowing through a rounded nozzle; tests on the flow factor in nozzles and sharp-edged orifice plates. There is also a series of useful formulæ on flow through measuring devices, with a number of graphs and charts."

Mechanical world, March 19, 1948, p.320. ⅛ col.

"When the engineer has required authoritative data on flow through nozzles, or the characteristics of orifice plates and venturi tubes, he has had to look for them in many places, and perforce use what he could find in, very likely, the limited time available. Now, however, within the covers of this one book of moderate size he has a comprehensive collection of the work of eminent authorities, collated suitably for his convenience and, moreover, a comparison of the theoretical and essential experimental values demonstrated by a series of new graphs. Another useful feature is the presentation of a comprehensive range of formulæ."

Fuller, Raymond T. Nature quests and quizzes. 64p. 1948. Day, New York, $1.50.

Nature magazine, April 1948, p.173. ⅓ col.

"The author presents one hundred different quests calling for investigation by the reader. It is then wholly up to the reader to carry these out, aided by some hints the author gives to start one on one's way. Then there are one hundred quiz questions, to which the reader will find the answers—if he turns the book upside down. This book would be fun for anyone, and should have a special use for youth and group leaders." *R. W. W.*

Gade, John Allyne. Life and times of Tycho Brahe. 209p. 1947. Princeton Univ. Press, Princeton, N. J., $3.50.

Scientific monthly, May 1948, p.436. ⅝ col.

"Will make good reading for those interested in astronomy, in the personal characteristics of a great man, or in the customs of the sixteenth century." *Paul W. Merrill.*

Sky and telescope, April 1948, p.157. 1⅝ col.

"The preface of this little book begins: 'The year 1946 marked the four-hundredth anniversary of the birth of one of Scandinavia's greatest scientists, Tycho Brahe. These pages are thus intended as a quadricentennial tribute to the man, together with a description of the times in which he lived' . . . There is a short appendix giving a 'Brief Account of Tycho's Offspring' and a bibliography of publications in English, Latin, Danish, and other European languages, about Tycho and some of his contemporaries. The book seems accurate and is well written. A few hours spent with it gives an intimate glimpse of this romantic period of 300 years ago, and a vivid picture of a great astronomer." *C. M. Huffer.*

Garard, Ira D. Introduction to organic chemistry. Ed.3. 396p. 1948. Wiley, New York, $3.50.

Chemist, March 1948, p.123. ½ col.

"Writing especially for students who plan to take only a semester of organic chemistry, the author has presented the subject by stressing some of the more fundamental reactions and completely omitting some others, such as the Grignard reaction. It is debatable whether or not such presentation is to be preferred. In all cases the author has done a good job in outlining clearly and succinctly a background of organic chemistry. The problems at the end of each chapter and additional references are well and carefully selected . . . Can be satisfactorily used for a short introductory course in organic chemistry." *Frederick A. Hessel.*

Gardner, Ernest. Fundamentals of neurology. 336p. 1947. Saunders, Philadelphia, $4.75.

Journal of physical education, Jan.-Feb. 1948, p.63. ¼ col.

"Good size print, clear type, with better than usual photographs, illustrations and charts give one a good first impression of this text. The main value of this book should be in the Junior College or College text-book field for physical education students. The accurate and correct presentation of neurological information is valuable there, and this particular text will meet a long felt need. As a refresher course for the YMCA Director of Physical Education it would be especially valuable. A feature not usually included in these books is a biographical sketch of the pioneers in neurological advances through history of man." *George C. Morris, jr.*

Gates, R. Ruggles. Human ancestry. 422p. 1948. Harvard Univ. Press, Cambridge, Mass., $7.50.

American scientist, April 1948, p.296, 298. 1 col.

"Although an astonishingly large number of new discoveries of fossil man and fossil apes have been made in the last dozen years, this is the first comprehensive work in which descriptions of them are assembled. Here the new evidence is combined with the old to make an up-to-date account of human paleontology. Possibly even more noteworthy is the fact that the author . . . approaches his subject 'from a genetical point of view'."

Ghiselli, Edwin E., & Brown, C. W. Personnel and industrial psychology. 475p. 1948. McGraw, New York, $4.50. (McGraw-Hill publications in psychology.)

American business, March 1948, p.66. ½ col.

"The theme of the book is that the best way to achieve increases in production and improvements in the adjustment of employees to their jobs and work is through understanding the worker as an individual . . . [The book] shows a greater confidence in employee ability and potentiality than is generally held. As a result we think the book is worth careful study by all personnel and other executives who want to know more about new concepts in relations between management and the rank and file . . . Heavily documented, and many authorities have been drawn upon to prove points and to support the text. This careful, scholarly study will bring new understanding of human problems in business to anyone who reads it."

Girvin, Harvey F. Historical appraisal of mechanics. 253p. 1948. International Textbook, Scranton, Pa., $3.25.

Military engineer, March 1948, p.148. ¾ col.

"Not an ambitious book, but it is clearly written and well organized. The author discusses the growth of what is now known as mechanics from the nebulous time of the birth of science to the present decade. He points out the value of what is called the inductive method or the scientific approach to investigation in determining the nature of what is 'reality.' A bibliography of over three hundred publications attests the care of presentation. To an engineer, this book reads like a fascinating novel as the efforts of the great thinkers and experimenters unfold, gradually narrowing the path of investigation of each problem . . . Anyone interested in mechanics will find this a thoroughly enjoyable book, and will feel a new appreciation for the state of engineering today." *F. K.*

Glauert, H. Elements of aerofoil and airscrew theory. Ed.2, revised. 232p. 1947. Macmillan, New York, $4.

Mathematical reviews, Feb. 1948, p.113. ¼ col.

"The non-dimensional coefficients of lift, drag and moment have been redefined in accordance with modern practice. Briefly, the content . . . is as follows: introduction to dynamics and kinematics of fluid flows, plane airfoil theory, Prandtl lifting-line wing theory, biplane theory and wind tunnel interference, elementary propeller theory . . . H. B. Squire has added, as an appendix, a set of notes, to which reference is made at various points in the text, indicating

where present knowledge or practice deviates from the material in the text and giving references to sources of further information. A short bibliography of some well-known modern books on aerodynamics has also been appended." *W. R. Sears.*

Glockler, George, & Glockler, R. C. Chemistry in our time. 667p. 1947. Crofts, New York, $4.50.

Journal of chemical education, April 1948, p.238. 1 col.

"The authors present and describe facts and theories of chemistry with a minimum of mathematics. The student is asked to do little reasoning instead of presented with a prodigious amount of material to memorize. The questions and answers at the ends of chapters summarize the salient points; few require the use of numbers . . . Divided into six sections: the Concept of Matter, the Concept of Energy, Fundamental Particles, the Scientific Approach, the Division of Chemistry, and the Applied Fields of Chemistry . . . Contains few typographical errors, but is printed on paper of very poor quality. The binding is average. Unfortunately the book appears to have been hastily assembled . . . The recent growth of courses in elementary chemistry for college students not majoring in science has posed the twin problems of selection of subject matter and method of presentation. This book merits consideration if only because it presents one extreme solution—the descriptive approach." *R. M. Sherman.*

Gorter, C. J. Paramagnetic relaxation. 127p. 1947. Elsevier, New York, $2.25.

Journal of chemical education, May 1948, p.296. ⅛ col.

"Paramagnetic relaxation is shown by the frequency dependence of paramagnetism in transition group substances, especially at low temperatures. One never knows when some less familiar branch of physics will emerge as a useful tool in chemistry, but certainly the text of this carefully written and scholarly little book . . . will appeal to no more than a handful of chemists in the world. The recent more spectacular advances in nuclear magnetism are not a part of Professor Gorter's subject. But surely this little book should have an honored place in every library in the land; not so much for its subject matter, but for how it came to be written. It is a monument to those men who kept alive a slender thread of learning when almost all the other attributes of civilization seemed failing." *P. W. Selwood.*

South African mining and engineering journal, March 6, 1948, p.27. ⅛ col.

"The author is Professor of Experimental Physics in the University of Leyden, and this monograph gives the results of theoretical investigation and experiments carried out during the war years. The experimental methods used were the heterodyne beat method, calorimetric method and a bridge method. Dispersion and absorption measurements were made on a number of salts, gadolinium, chromic, vanadous, ferric, manganous, nickel and cupric, and the data are given for a number of temperatures. The author also draws attention to later researches in Russia and America. This subject is a specialised field of research and will appeal mainly to fellow-scientists, to whom the book can be recommended."

Guenther, Ernest. The essential oils. v.1. 427p. 1948. Van Nostrand, New York, $6.

American perfumer and essential oil review, April 1948, p.347. 1⅞ col.

"Divided into four chapters. The first, dealing with the origin and development of the essential oil industry, is written by George Urdang, who is a recognized expert. Chapter 2 is written by A. J. Haagen-Smit who discusses the chemistry, origin and function of essential oils in plant life. Chapter 3 written by Dr. Guenther, reviews the production of essential oils in its numerous phases as these apply to straight essential oils, and to natural flower oils. Edward Langenau writes Chapter 4 on the examination and analysis of essential oils, synthetics and isolates . . . The author and the company he works for are to be complimented for giving so liberally of their time and 'know-how' for the benefit of the aromatic and essential oil industry as a whole . . . [It] will become the bible of the essential oil trade in the years to come as Gildemeister and Hoffman were of the last two generations . . . Every well-posted cosmetic, essential oil and aromatics chemist will want this volume and succeeding volumes in his library."

Chemical engineering, May 1948, p.318, 320. 1⅛ col.

"Dr. Guenther brings to this book not only the advantage of on-the-spot investigations, the assurance that his descriptions are based upon unadulterated samples and oils, but the wealth of chemical and botanical advancement that science has made since the publication of previous studies in this field . . . Because of the great contribution the essential oil industry has made to the development of distillation, and because of the attention to progress in distillation given by the industry and by this book, it will have an appeal to organic chemists and chemical engineers who may not be concerned with the production or use of volatile oils. We regret that the bibliographical references are scattered throughout the book, and that they are made all the more difficult to locate because of a lack of an authors' index. Otherwise, the book is well indexed, and the material well arranged." *Edward Sagarin.*

Food industries, April 1948, p.215. ⅝ col.

"A broad reference work on essential oils is inaugurated with the appearance of this volume . . . Treats of the history, chemistry, biological origin and function of these oils in plant life. Synthetics and isolates are also examined . . . Includes production of essential oils and deals with processes in use throughout the world. An attempt is made to stress the procedures that make for the greatest efficiency . . . Succeeding volumes will describe the chemical constituents of essential oils and will offer detailed descriptions of individual oils. It is expected that the completed work will constitute the most practical and authoritative work ever published on essential oils."

Györgyi, Albert Szent-. See Szent-Györgyi, Albert.

Hartwell, Samuel W. Practical psychiatry and mental hygiene. 439p. 1947. McGraw, New York, $3.75.

American journal of public health, April 1948, p.575. 1 col.

"Written with the purpose of helping the student develop a dynamic interest in psychiatry, of making psychiatry more easily understood,

and of making the teaching of psychiatry practical. The author has succeeded well in these objectives . . . Simply and clearly written. There is a minimum of technical jargon and an excellent glossary is provided as reference for the necessary technical terms which are introduced . . . While the text is written for nurses and the practical suggestions for treatment are particularly appropriate for the nurse, the general simplicity and clearness make it a valuable text for a group who do not have a preliminary medical education." *James M. Cunningham.*

Hausman, Leon Augustus. Birds of prey of northeastern North America. 164p. 1948. Rutgers Univ. Press, New Brunswick, N. J., $3.75.

Natural history, April 1948, p.150. ⅝ col.

"This handsomely produced book appeals for the protection of the birds of prey and emphasizes their usefulness . . . For the beginner or general reader this book will provide a brief and fairly accurate introduction to the birds of prey, but even the moderately informed bird student will find very little in its pages that is new to him." *D. Amadon.*

Nature magazine, April 1948, p.221. ½ col.

"Presents a true picture of our birds of prey and their place in Nature's scheme. With interestingly written and accurate text, the author describes the life histories and habits of the American vultures, the American hawks, eagles and their kin, and the owls. Gradually these birds, after generations of prejudice and misinformation, are gaining better understanding and more and more friends. Dr. Hausman's book should add to the numbers of the latter."

Heron, Alexander R. Why men work. Stanford Univ. Press, Stanford Univ., Calif., $2.75.

American business, April 1948, p.66. ⅞ col.

"Mr. Heron describes and analyzes many of the reasons why men do not work as they once worked. Then he points out, in one way or another, some of the things which have been or may be a remedy for the problem of getting men to work at their jobs with at least part of the zeal they show in working their own gardens, or painting the sunporch at home. Not since we read Clint Golden's book have we read one which seemed to reek with a true knowledge of the worker as this one does . . . We do not recommend this book to the management man who is seeking a pat cure-all—some nostrum which he can administer as if it were horse medicine. But we do recommend it heartily to the serious student of industrial relations who is unwilling to dismiss problems with a shrug of the shoulders and the assertion that 'people are different today.' It is a challenging book, worth the study of every man who wants to get along better with the people who work with him. This should include every man who is in charge of one assistant—or a thousand."

Hildebrand, Joel H. Principles of chemistry. Ed.5, revised and enlarged. 446p. 1947. Macmillan, New York, $4.25.

Chemical and engineering news, March 22, 1948, p.896. ⅔ col.

"Devoted entirely to the purely theoretical aspects of chemistry. Descriptive chemistry has been kept at a bare minimum. Yet the book, like its predecessors, has been ostensibly written for college freshmen. One is led to question its suitability for students other than those who have already had a good background of high school chemistry and mathematics. It would appear to be well suited to a course given solely for chemistry majors and chemical engineers, particularly if supplemented with such a book as Latimer and Hildebrand's 'Reference Book of Inorganic Chemistry'." *Aaron J. Ihde.*

Chemical engineering, May 1948, p.316, 318. ½ col.

"Hildebrand's outstanding text, in the hands of a competent teacher, is an eminently flexible teaching tool. Treatment of new topics and revision of older material have brought this . . . edition completely up to date. New chapters on carbonic acid and its ions, systems of acids and bases, and the structure of inorganic compounds have been included. Polymers, silicones, transuranium elements and recent discoveries in atomic structure have been dealt with in new sections. When its use is supplemented by use of a good descriptive chemistry text and a laboratory manual, Hildebrand's book serves admirably in teaching the introductory course in chemistry, particularly the course for students majoring in the field . . . Also a convenient and useful guide that the practicing chemist, chemical engineer or executive might dip into occasionally to check up on some relatively simple but perhaps hazy point." *Joseph A. O'Connor.*

Journal of chemical education, May 1948, p.297. 1 col.

"The book is too well known to require either introduction or recommendation. It does both for itself far better than elaborate words of praise could do. It need only be added that the new edition enhances in no small measure the very enviable reputation already established by its predecessors." *Sidney J. French.*

Hogness, T. R., & Johnson, W. C. Qualitative analysis and chemical equilibrium. Ed.3. 553p. 1947. Holt, New York, $3.20.

Chemical and engineering news, April 19, 1948, p.1182. ⅓ col.

"The authors state that their objective is to use qualitative analysis to teach chemical equilibrium; this treatise does that in an admirable manner. Numerous tables of equilibria are presented for each ion studied, together with a brief discussion of the chemical properties of those ions. Emphasis is placed upon a clear understanding of processes rather than upon empirical procedures. The theoretical part has been modified and improved, but it carries essentially the same topics as the preceding editions. Increasing emphasis has been placed on electronic structure with the hope of making it possible for the student to consider properties in terms of structure. The experimental part is presented on the semimicro basis . . . An improvement of an already very good book . . . Deserves and will certainly receive the careful attention of many good teachers of qualitative analysis." *A. B. Garrett.*

Horsley, Terence. Fishing and flying. 224p. 1948. Eyre, London, 12s. 6d.

Aeroplane, March 19, 1948, p.346. ½ col.

"Now that I have read 'Fishing and Flying' . . . I would rather have read two books, 'Fishing' and 'Flying,' by the same author. Then they could have been read at a time when they would appeal most, for fishing and flying are as poles apart . . . An interesting and vitally written book. If fishermen skip the aeronautics and aeronauts skip the fishing, both will enjoy it." *K. S.*

Hull, Thomas G. Diseases transmitted from animals to man. Ed.3, revised and enlarged. 571p. 1947. C. C. Thomas, Springfield, Ill., $10.50.

American journal of public health, April 1948, p.577. 3⅛ col.

"This . . . edition is more comprehensive than the earlier editions. The new chapters on rickettsial and virus diseases have broadened its scope. Public health workers will find it most interesting and practitioners of human and veterinary medicine will find a common ground . . . A book of this kind is much needed in the respective fields of public health, human medicine, and veterinary medicine. The book points out very excellently by its omissions how little is known of many of the bacterial, rickettsial and virus diseases in animals. There is an important need for the study of animal epidemiology, bacteriology, and pathology in those diseases of animals which are communicable to man." *James H. Steele.*

Quarterly review of biology, March 1948, p.79. 1 col.

"There are many diseases that are shared by animals and man and others that are passively transferred from man to man by way of animals. This book is concerned with these diseases. All types of pathogens are considered here: viruses, bacteria, fungi, protozoa, and helminths. They are presented under four major sections: Diseases of Domestic Animals and Birds; Diseases of Rodents and Wild Animals; Human Diseases Spread by Animals; and Animals as Passive Carriers of Disease Organisms. A final chapter summarizes the role [sic] played by each animal in the spread of disease . . . An interesting and valuable book." *M. M. Brooke.*

Hunter, Dard. Papermaking; the history and technique of an ancient craft. Ed.2, revised and enlarged. 611p. 1947. Knopf, New York, $12.50.

Paper industry and paper world, March 1948, p.1856. ⅓ col.

"There are new chapters covering the technique of modern handmade paper fabrication and present-day watermarking practices. There is also new material relating to the making of papyrus and the primitive bark-papers of Mexico and the islands of the Pacific. Comprehensive studies of forgery and counterfeiting have been added. All of the material of the first edition is retained . . . The average reader, and many researchers will find answers to their questions about paper."

James, Hubert M., and others, ed. Theory of servomechanisms. 375p. 1947. McGraw, New York, $5. (M.I.T. radiation laboratory series, v.25.)

Electrical review, April 16, 1948, p.580. ⅜ col.

"This scholarly text . . . is an important contribution to the literature; it will be of considerable value to designers and post-graduate students already acquainted with communications terminology and the theory of Fourier and Laplace transforms." *L. C. L.*

Electronics, May 1948, p.250, 252. 2⅓ col.

"A treatise on servomechanisms which is several times more ambitious and more advanced than any which has thus far been published . . . The general presentation can best be indicated and accounted for by noting that all the authors are mathematically articulate and that two of them are recognized as mathematicians of parts. On the other hand, much practical and detailed data are given of servo components, and such extremes typify the book's large scope . . . The authors and editors must be congratulated on their handling of a large and difficult task." *George A. Philbrick.*

Science, May 14, 1948, p.511. ⅔ col.

"In the first four chapters . . . one finds a short history of servo design technique, some performance specifications, and a brief introduction to the mathematics used in the analysis of servo systems . . . The fifth chapter deals with filters subjected to pulsed data, their transfer functions, and their stability. Pulsed servos and their characteristics are discussed in this chapter. The last three chapters are concerned with the mathematics of statistics and statistical methods applied to control. A new design technique based on the minimum root mean square error in the presence of extraneous noises and inputs is described and applied. There is correlation between the various chapters, and the sequence of topics discussed is well chosen. Illustrative examples and diagrams are presented throughout. The 8 chapters . . . written by 10 members of the Radiation Laboratory, constitute a valuable contribution to the science of servomechanisms." *E. M. Sabbagh.*

James F. Lincoln Arc Welding Foundation. Welding helps for farmers. 448p. The Foundation, Cleveland, $1 (Foreign, $1.50).

Industry and welding, April 1948, p.54. ⅓ col.

"Divided into 16 sections. The first six sections give general information about the use of welders on farms and also detailed directions for operating an arc welder. The remainder . . . is devoted to stories told by farmers of tools and equipment they build, along with accounts of how the work was done."

Pennsylvania farmer, April 10, 1948, p.45. ⅛ col.

"Written entirely by farmers. Dozens and dozens of them from all parts of the country have contributed their experiences in using welding equipment to keep farm machinery in operation. As a result the book, is a collection of handy hints, useful devices and ingenious ways to repair, improve or renew farm machinery . . . Well illustrated with photographs and has detailed instructions on making various welds, setting up a farm work shop and making all sorts of labor saving things for the farm."

Jones, Philip W. Practical job evaluation. 304p. 1948. Wiley, New York, $4.

Industrial relations, April 1948, p.39. ½ col.

"Jones understands the relationship of job evaluation to the whole industrial relations program. He spends some time going over this and emphasizing its importance in setting up a really successful program. The book should be especially interesting to industrial relations executives who are toying with the idea of doing something about job evaluation. There is a brief history of this subject in the book, and then the author goes on to tell how job evaluation is planned and installed in detail. Each chapter covers a separate phase such as job description, weighting, picking bench jobs, development of the wage structure, etc."

Production engineering & management, May 1948, p.93. ¼ col.

"Practical aspects of job evaluation, which emphasize the design, installation and salesmanship procedures necessary to determine wages of employees, are discussed . . . Including successful plans and techniques firmly established in both business and industry, the author explains selection of job characteristics and the weighing of these characteristics, selection and evaluation of key-list jobs, with a description of the evaluation process, and employee classification. In addition, chapters are devoted to determination of job evaluation and the development of wage structures."

Kimbark, Edward W. Power system stability. 3v. v.1: Elements of stability calculations. 355p. 1948. Wiley, New York, $6.

Electrical west, April 1948, p.60. ⅙ col.

"Covers the elements of the stability problem, principal factors affecting stability, simplified methods of making stability calculations and the practical application of these methods to actual power systems. Nearly one hundred pages are devoted to detailed accounts of actual stability studies made during the past ten years, including system diagrams, detailed curves and tabulated data. This careful application of methods presented should be of value in applying them to any specific problem of this type."

Electrical world, April 10, 1948, p.191. ⅛ col.

"Professor Kimbark's practical experience with power system analyses imparts to this introductory volume a leavening of the academic factors which is helpful to the power system engineer. For example, there are simple explainations [sic] of the per-unit procedure for computing impedances, how a.c. boards are used in system studies, how the more laborious computations would be organized, the effect of fault-clearing time and the technique of simplifying and representing short-circuits and ground faults. Volume I closes with the essence of four typical system stability problems."

King, Reno C., jr. Practical marine engineering. 470p. 1948. Prentice-Hall, New York, $6.

Marine engineering and shipping review, April 1948, p.96. ⅛ col.

"The author . . . has succeeded in his endeavor to write a book dealing with the basic elements of marine steam power plants from the point of view of the man charged with their operation. Not a theoretical text, the work is the outgrowth of a series of lectures given by the author to applicants for marine engineer's licenses. The examination which such applicants must pass are basic and fundamental and the subject matter covered in the text is patterned after them . . . Includes chapters on boilers, combustion, reciprocating steam engines, steam turbines, electricity, refrigeration, pumps and unfired pressure vessels, deck machinery, fire-fighting equipment, respiratory apparatus, and miscellaneous machinery items."

Military engineer, April 1948, p.187. ½ col.

"A text on the basic elements of the marine steam power plant. For the operating man, it is a useful manual for home study, and it is a handy source of information for the marine engineer at sea . . . Profusely illustrated with photographs and drawings, the book is complete, compact, and accurate. At the end of each chapter is a long list of questions designed to cover the subject matter in the chapter . . . An excellent treatment of marine steam power from a practical point of view." *F. K.*

Kisch, Bruno, ed. Studies in biochemistry. 207p. 1947. Brooklyn Medical Press, Inc., P. O. Box 99, Station H, New York, $10.

Chemical and engineering news, April 26, 1948, p.1246. ⅔ col.

"Dedicated to Carl Neuberg for his seventieth birthday. Since 1941 Dr. Neuberg has been research professor at New York University. The volume consists of a short letter to Neuberg by the editor . . . a seven-page biography of the honoree, and 19 articles contributed by former pupils, friends, and colleagues . . . Most of the papers included . . . are of the types too often found in dedicatory volumes. Several in their present form would be unacceptable for publication in a scientific journal; others are short reviews of previously published work . . . Very poorly edited, there being an unbelievable number of misspellings and omission of punctuation marks . . . Only a few of the articles seem worthy of being dedicated to Carl Neuberg on his seventieth birthday." *Carleton R. Treadwell.*

Kiss, Stephen A. Transformations on lattices and structures of logic. 322p. 1947. The Author, 11 E. 92nd St., New York, $7.50.

Mathematical reviews, Feb. 1948, p.76. ⅔ col.

"Intended by the author to be 'a guide for those actively interested in the development of 4-class and 16-class logic and mathematics' . . . Consists of nine chapters with the following titles: Structures; Sets, groups and rings; Partially ordered systems and lattices; Link-preserving transformations and direct unions of lattices; Boolean algebras; Direct unions of chains and number systems; Calculus of classes; Calculus of propositions; Calculus of propositional functions . . . Contains a number of digressive comments of a strictly non-mathematical nature." *K. Chandrasekharan.*

Knight, Stephen A. Fundamentals of radar. 128p. Pitman, London, 10s.

Aeroplane, April 23, 1948, p.488. ¾ col.

"Mr. Knight's description of the wave-form circuits is excellent, simple to understand and very logically described. The same applies to the chapters on the cathode-ray tube and on transmitters and receivers which include a few pages of first-class stuff on the nagnetron [sic]. No doubt Mr. Knight will be accused by pedants of 'over-simplification' . . . The criticisms of Mr. Knight's excellent book are chiefly those of omissions of certain aspects which particularly interest the airman. In all fairness it must be pointed out that Mr. Knight is writing mainly about what used to be called radiolocation—the detection of aircraft from the ground. These equipments are, of course, the basis of all air radar devices and therefore any airman who wishes to understand the underlying principles of the circuitry of his equipment will be well advised to read this book. And anyone who may have to teach the subject might well use some of Mr. Knight's excellent illustrations and analogies."

Electrician, April 2, 1948, p.1045. 1⅛ col.

"If only for the guidance of the many potential writers in this field, it is worth pointing out that this book does not fulfil the promise of

its title. This is not a particularly serious criticism of the author's work, which within limits, is first-class, but to expound the 'fundamentals of radar' would take many more pages than he has at his disposal; what he has really compiled, quite successfully, is a guide to some fundamental radar circuits—a very different thing." *C. B. W.*

Kozman, Hilda Clute, and others. Methods in physical education. 552p. 1947. Saunders, Philadelphia, $4.25.

Journal of physical education, Jan.-Feb. 1948, p.63. ⅛ col.

"Designed for the student preparing to teach physical education in secondary schools. The subject matter is well presented with an outline of the main issues of each chapter at each chapter heading. The text describes fully the place of physical education as an educational medium toward better living. Although designed primarily for the student, the text has great value toward a more complete understanding of the importance of YMCA physical education program for today's youth." *R. U.*

Langman, H. R., & Moore, J. H. Electrical handicraftsman and experimenter's manual. 192p. 1948. Technical Press, London, 10s. 6d. net.

Mechanical world, April 9, 1948, p.411. ⅓ col.

"Deals in a practical way with the design and construction of simple electrical apparatus and machines . . . The book is rather a collection of examples of what can be done by the amateur constructor and model-maker, than an ordered text-book on design and, in spite of its somewhat heterogenous character, it contains a good deal of practical information and a number of useful constructional hints. The latter part of the book, dealing with demonstration models, will be of interest to those in charge of science laboratories in technical schools, where the funds available for equipment are restricted. The index to the book is rather sketchy, and might with advantage have been much fuller than it is." *G. W. S.*

Model engineer, April 15, 1948, p.402. ⅓ col.

"Its sub-title 'a new practical *vade-mecum* for all experimenters, inventors, students, and all interested in the construction of electrical mechanisms, appliances and experimental apparatus,' adequately describes its contents . . . Profusely illustrated with line drawings, and while some of these may be open to criticism on the grounds of rather heavy or untidy draughtsmanship, they never fail to achieve their object of elucidating the working principles of the devices they portray. Both the quantity and wide range of the subject-matter represent excellent value for money."

Leet, L. Don. Causes of catastrophe. 232p. 1948. McGraw, New York, $3. (Whittlesey House publication.)

American scientist, April 1948, p.296. 1½ col.

"In these pages from the notebook of the seismologist in charge of the Harvard Seismological Station, there is a highly informative study of earthquakes, volcanic eruptions, hurricanes and tidal waves. The text is easy to read; its content is arresting; the facts presented are of vital importance. The fundamental theme is apparent—modern science provides knowledge that if used aright will greatly reduce the disastrous consequences of the inevitable catastrophes of nature. But the book is not hortatory; it is a calm, dispassionate presentation of some of the oft-neglected facts of life. In keeping with the mental habit of the well-trained geologist, Dr. Leet adopts the historical approach to his problems."

Natural history, April 1948, p.151. ⅝ col.

"Concerned with the more violent aspects of natural phenomena and with a nontechnical explanation of the known facts as to the 'how' and 'why' of their occurrence . . . When a work is as well written and authoritative as this one, it is difficult to venture to criticize it without seeming to carp at minor matters. Nevertheless, to this reviewer, at least, it would have been a better book had certain extraneous material been deleted from the chapter appropriately entitled 'Mountain Making and Volcanoes in the Pacific.' Matters such as an understanding of the International Date Line, or a log of a trans-Pacific flight, or the pronunciation of Japanese place names are undoubtedly interesting, but they do derail a train of thought with almost catastrophic results of their own . . . Strongly recommended to all who are interested in this world on which we live; but it is suggested that Chapter 5 might be skipped until the rest of the book has been read. Then, by all means, go back and read it, too." *H. E. Vokes.*

Scientific monthly, June 1948, p.526. 1½ col.

"Dr. Leet has written an urbane, instructive, entertaining, though somewhat uneven, discussion of some of nature's more violent manifestations . . . The treatment of earthquakes is distinctly more comprehensive, more authoritative, and consequently more successful than that of the other topics . . . Dr. Leet does a valuable service in dispelling many myths connected with earthquakes . . . Abundantly illustrated, but suffers from poor integration of text and illustrations." *G. D. Robinson.*

Leonard, Fred Eugene. Guide to the history of physical education. Ed.3, revised and enlarged by George B. Affleck. 480p. 1947. Lea, Philadelphia, $5.50.

Hygeia, April 1948, p.301. ⅝ col.

"Constitutes a careful and exhaustive survey of physical education history . . . Traces the development of physical education through the chief organizations with which it has been associated. Progress in the field within the last twenty years is detailed along with the contributions made by various professional leaders . . . Well printed and contains numerous illustrations. The bibliographies at the conclusion of each chapter include ample material for further study . . . Especially recommended to those interested in an extensive and thorough historical research in the area." *Fred V. Hein.*

Lichty, Lester C. Thermodynamics. Ed. 2, revised. 341p. 1948. McGraw, New York, $4.50.

Power, March 1948, p.116. ¼ col.

"Maintains the original aim of minimizing mathematical manipulations in favor of emphasizing methods of fundamental analysis applied to energy relationships. The text has been largely rewritten to clarify the more difficult subjects. A feature that students will welcome is the adoption of treating all energy elements as independent, positive quantities, eliminating the expression of energy components as the difference between that entering and leaving.

This avoids confusion on the student's part in proper observation of mathematical signs."

Liddicoat, Richard T. Handbook of gem identification. 283p. 1947. Gemological Inst. of America, 541 S. Alexandria Ave., Los Angeles, $4.50.

Jewelers' circular-keystone, March 1948, p.272. 1⅓ col. including another review.

"No new tests or original work appear to be included . . . There are excellent photomicrographs taken by Dr. E. Güberlin, together with a fairly complete array of the instruments sold by the Gemological Institute of America. The errors which have crept into the text are in part explainable by the author's unfamiliarity with the stones he is discussing."

Logie, Gordon. Furniture from machines. 150p. 1948. Allen & Unwin, London, 21s. net.

Wood, March 1948, p.81. ⅔ col.

"Should have a place in the libraries of all furniture manufacturers and designers. Mr. Logie writes well and has something interesting and thought provoking to say in each of his fifteen chapters. Being obviously a trained observer with a tidy, analytical mind, free from prejudices, and aware of the value of tradition without being overawed by it, Mr. Logie does not go to the opposite extreme of accepting all new materials and methods of construction at their 'sales talk' values. The result is an unusually well balanced, easily readable and rather novel book, with its points clearly illustrated by 159 photographs and line drawings." *E. P.*

McBride, Mary Margaret, ed. How to be a successful advertising woman. 259p. 1948. McGraw, New York, $3. (Whittlesey House publication.)

Broadcasting, March 22, 1948, p.30. ⅓ col.

"Sixteen women who have themselves reached the top in advertising describe the opportunities in their field—the training needed, the advancement and the money that can be made in this book written for Advertising Women of New York Inc. . . Public relations, fashion illustrating, market research, radio, publishing, the advertising agency, and other related fields are examined in the 14 chapters by top career women. Book is outgrowth of the Survey of Advertising Course, conducted for the past 19 years by the Advertising Women of New York Inc."

Printers' ink, April 23, 1948, p.82. 10 l.

"Fourteen main topics in advertising treated by as many different successful women in advertising . . . make up the body of the book; and there's special interest in a 20-page section, Capsule Careers, of brief biographical sketches of several dozen advertising women, nearly every one of them telling her first job and starting salary."

McNair, James B. Analysis of fermentation acids. 290p. 1947. Westernlore Press, P. O. Box 73, Los Angeles, $7.50.

Analytical chemistry, April 1948, p.384. ⅓ col.

"Hitherto information concerning the qualitative and quantitative determinations of the fatty acids commonly produced by fermentation, such as formic, acetic, proplonic, butyric, and lactic, has been found widely scattered through the literature and in books on physiological or medical chemistry. This includes such biological material as foods, vegetable products, silage, honey, wine, alcohols, vinegar, esters, sour milk, cheese, blood, urine, and feces. In this book the author has collected analytical information from many sources and has codified, edited, and condensed it in the light of his long analytical experience. The general plan followed is the description of an analytical method for an acid selected from the literature for its apparent utility. Criticisms and modifications as suggested by various workers are reviewed and the accuracy of the method is discussed, usually from the author's own findings . . . Should be in every laboratory where analyses of fermentation acids are required." *L. E. Warren.*

Malmberg, Carl. 140 million patients. 242p. 1947. Reynal, New York, $2.75.

American journal of public health, April 1948, p.573. 4 col.

"In his capacity as public relations advisor and information specialist for the U. S. Public Health Service and, recently, as chief investigator for the Sub-Committee on Health and Education of the Senate Committee on Labor under the chairmanship of Senator Murray, the author has been able to assemble a mass of factual data which demonstrate clearly that there is much room for improvement in the health of the nation. The monograph is readable, interesting, and for the most part thoroughly convincing. It marshals authentic information bearing upon the dual problems of medical care in the United States and of national compulsory medical insurance in a more effective manner than any volume previously published on this subject. It will become the bible of proponents of compulsory medical insurance . . . The journalistic experiences of the author have persuaded him to over-dramatize some of the factual material, which may mislead many lay readers who are not in possession of all the medical facts . . . Should be required reading for every health worker and every physician in the country." *George Baehr.*

Marin, Joseph. Strength of materials. 464p. 1948. Macmillan, New York, $4.75.

Military engineer, May 1948, p.244. ½ col.

"The author has presented a fine treatment of an important basic enginering [sic] topic. There are many good texts for a first course in strength of materials, but this one is unexcelled in three respects. First, the illustrative diagrams and problems are very clear. Second, the author carefully points out the many necessary assumptions and their limitations. Third, the viewpoint is unrestricted in that diverse applications to design of structures and machines are suggested in the text and problems . . . In arrangement, the book is well designed for study and reference . . . Clear type, neat page arrangement, and careful makeup add much to the clarity of the content of the book. The treatment is rigorous, yet the text is easily read and understood." *R. K.*

Welding journal, May 1948, p.396, 398. ⅓ col.

"The material . . . has been selected for use as a text in a first course in Strength of Materials. One of the main features . . . is the treatment of mechanical properties of materials under various types of static stresses coordinated with the analysis of stresses and design of simple machine and structural members. The correlation between stress analysis, mechanical properties and design is made possible by a dis-

cussion of mechanical properties at the end of each chapter. In this way, the student is better prepared to proceed with the study of machine, structural and aircraft design."

Molloy, Edward. Questions and answers on electric motors. Ed.3. 120p. 1947. Newnes, London, 5s. net.

Electrician, April 2, 1948, p.1046. ⅔ col.

"The fact that this small manual has already reached its third edition is proof of its general usefulness. In preparing his questions, the author has selected from a wide field information likely to be required by installation engineers concerned with the maintenance of electric motors in industry, and has confined himself to practical considerations, rather than to the highly specialised subject of electric motor design . . . Eleven tables give data on such subjects as the wiring capacity of conduits, H.R.C. fuse ratings, and so on."

Morris, P. A. Field guide to the shells of our Atlantic coast. 190p. 1947. Houghton, Boston, $3.50.

Scientific monthly, March 1948, p.262. ¾ col.

"This very excellent little Field Guide should find a ready welcome among the shell collectors of the eastern coast. More than four hundred exceptionally clear photographs on a black background permit rapid and certain identification. Eight color plates are included which, in general, are very good . . . There is a total lack of synonymy which, for the layman, is perfect. At the back of the handbook there is a short glossary—always a help to the beginner, and a ready source of reference to the more advanced conchologist. The discussions in the introduction, on the various classes, might have been a bit longer and more fully developed, for many users of this book will undoubtedly be amateurs who are not grounded in the fundamentals of conchology . . . Not the least in the book's favor is its size, for it fits nicely into one's pocket, as field guides should, for on-the-spot identifications. Its good illustrations and lucid descriptions fill a need long felt by all those interested in Atlantic Coastal shells." *Charles T. Berry.*

Muteham, Wilfred A. How to become a pharmacist. 120p. 1948. Actinic Press, London, 5s.

Chemical age, March 20, 1948, p.404. ⅓ col.

"Manages to survey in a short space all the fundamental information of an essentially practical sort which a young man should have before committing himself to the five or more years of disciplined study without financial recompense which, if he applies himself with sufficient singlemindedness, will entitle him to write Ph.C., or B.Pharm. and possibly M.P.S. after his name."

Manufacturing chemist, April 1948, p.166. 12 l.

"The purpose of this book . . . is to describe the opportunities offered by pharmacy and to outline the personal qualities and academic qualifications necessary for success. The syllabuses of the various qualifying examinations are briefly mentioned and the centres where training can be undertaken are given in an appendix. Much of the book deals with the business side of pharmacy . . . Written in the avuncular style one would expect in what is really a printed and expanded version of a fireside chat."

Osborn, Fairfield. Our plundered planet. 217p. 1948. Little, Boston, $2.50.

Natural history, May 1948, p.196. ¾ col.

"Soberly, yet dramatically . . . [the author] tells how man, and more particularly 'civilized' man, has overspent the interest and dug deeply into the capital of natural resources." *R. C. M.*

Science, May 14, 1948, p.510. ⅝ col.

"A book that should be widely read; almost anyone reading it will want to recommend it to others. It tells perhaps the most important story of our day—and tells it well." *William Vogt.*

Science illustrated, May 1948, p.62. ⅓ col.

"[Mr. Osborn presents] the shocking record of man's war with nature through the ages. He makes it pretty plain that man—also a part of nature's scheme—is destroying his own life sources with such accumulated velocity that unless he does something about it he faces a greater ultimate disaster than would follow the misuse of atomic power. Mr. Osborn . . . has some harsh things to say about DDT, soil chemistry, and similar scientific advances . . . A stimulating and provocative book."

Pearce, W. E. Introduction to wireless. 243p. 1948. Bell, London, 7s. 6d.

Model engineer, April 15, 1948, p.402. 11 l.

"Deals in a lucid manner with the basic principles and essentials of wireless apparatus, but is comprehensive and fully up to date, and can be recommended to all serious students who wish to explore the subject thoroughly from the groundwork upwards."

Transactions of the Institute of Marine Engineers, March 1948, p.66. ⅛ col.

"This admirable little book has been needed for a long time and whilst of no special value to marine engineers it is most valuable to any student, schoolboy or adult, who wants to know something about wireless and how to set about the study of it, but who is daunted by the average highly mathematical approach. The author has succeeded in explaining, by means of ingenious analogies and experiments, much which is usually only dealt with mathematically. One or two of them are perhaps likely to lead to a young student drawing a false conclusion, or at least, learning a half truth and in some instances, the author has somewhat skimped his descriptions. For instance his descriptions of batteries and telephones are not all that they might be. These are, however, minor blemishes in an excellent little book which can be strongly recommended to anyone who wants to know how wireless works."

Pearson, Haydn S. Successful part-time farming. 322p. 1947. McGraw, New York, $3.

Fertilizer review, March-April 1948, p.15. ⅛ col.

"The author . . . discusses in an earthy, practical manner the problems confronting part-time farmers. Successive problems are covered in detail, including the selection of a location, the questions whether to buy or rent, remodel or build, and how much acreage is needed. These chapters are followed by others on operation and management. The growing of various crops and animals adapted to small-acreage farming is discussed, with suggestions for growing and feeding. Many other questions that arise in developing a home-part-time-farming operation are discussed in detail for the benefit of the amateur."

Perrigo, A. E. B. Electricity supply meters. 356p. 1947. Chapman & H., London, 32s.

Electrical review, April 2, 1948, p.527. ⅝ col.

"The first 47 pages . . . deal with the construction, underlying principles and methods of use of well-known electrical instruments. The second portion comprises 203 pages devoted to the construction, theory and methods of testing of a.c. and d.c. watt-hour meters. The theoretical treatment of the subject assumes a knowledge of elementary calculus and electrical engineering principles . . . While there is little new material in this book, it should prove useful to the more junior engineers engaged in supply undertakings' meter departments. For the engineer or experimentalist who uses instruments in his investigations, the major portion of the book will be of little interest." *H. A.*

Electrical times, April 8, 1948, p.436. ¼ col.

"In the past, most books on this subject have erred either on the side of over-simplification or of over-elaboration, but in this case Mr. Perrigo has struck a reasonable mean. Although he is writing primarily to aid the meter engineer, who he considers to be equipped with a reasonable knowledge of vectors, electrical phenomena, trigonometry and elementary calculus, the book will also be most helpful to those engaged in research and experimental work."

Robson, A. Introduction to analytical geometry. 215p. 1947. Cambridge Univ. Press, London, 10s. 6d.

Philosophical magazine, Feb. 1948, p.164. ⅓ p.

"The outstanding feature of this book is the broad point of view taken by the author. An attempt has been made to fuse pure and analytical methods and the subject matter has been developed in a manner which frees the student from the unnecessary restrictions imposed by a more traditional treatment . . . This text is important in that it points the way to a new treatment of analytical geometry both in schools and the first year at the Universities." *L. S. G.*

Seinwerth, Herman W. Getting results from suggestion plans. 223p. 1948. McGraw, New York, $3.

Management review, April 1948, p.220. ⅖ col.

"No one could have written this handbook except a man with Mr. Seinwerth's extensive experience with suggestion systems. Mr. Seinwerth has been manager of Swift & Company's suggestion plan department and president of the National Association of Suggestion Systems. Every major problem related to the administration of a suggestion system is covered in this book." *Charles C. Gibbons.*

Shoemaker, Richard W. Radiant heating. 306p. 1948. McGraw, New York, $4.

Domestic engineering, April 1948, p.234. ¼ col.

"Subjects considered include structural advantages, panel location, the heating plant and control systems, the design and installation of radiant heating systems and radiant cooling. The author worked closely with most of the manufacturers who supply equipment currently used in radiant panel installations, and many of the items used are mentioned by their brand name."

Factory management and maintenance, April 1948, p.226. 9 l.

"Application, installation, and design data on radiant heating needed by architects, engineers, and contractors are included. What radiant heating is, and how it compares with other systems of heating are explained. Examples of radiant-heating constructions are included to illustrate the practical application of the system."

Heating and ventilating, April 1948, p.128. ⅝ col.

"Intended to clarify the general subject of radiant heating for the benefit of prospective home builders, architects and contractors. It may not appeal to the engineer who has basic knowledge of the subject and wishes to add to his data on the design of radiant heating systems. Although no attempt has been made by Mr. Shoemaker to produce an exhaustive treatise on radiant heating systems, sufficient data has [sic] been presented to give an overall concept of the subject. As compared with some of the books already published on radiant heating, it has much more information on heating plants. The author has drawn heavily on outstanding manufacturers of boilers and appliances for radiant heating, for much of his facts."

Heating, piping & air conditioning, May 1948, p.120. ½ col.

"One chapter is devoted to the description of boilers and heat generators, and the factors affecting their heat output and rating. Illustrations and applications of available controls are given. A general description is included with reference to the various panel heating system design methods which are now in use or advocated by designers and manufacturers. Methods of fabricating coils manufactured from various pipe materials are described and illustrated. The final chapter reviews in detail the theory and assumptions upon which computations for panel heating systems are based, and presents fundamental equations from various authorities for the determination of heat transfer values and constants to be used in the equations."

Shrewsbury, James B. An approach to radio. 288p. 1947. Electronic Industries, Princeton, Ky., $4.50.

Radio-craft, April 1948, p.87. ⅛ col.

"The author has written this book to present radio theory in a very simple and non-technical manner . . . Gives the necessary information to the beginner to permit him to approach a more detailed study of radio . . . Divided into eight chapters covering receivers, audio oscillators and amplifiers, and transmitters. There are many drawings and schematics throughout . . . and information is given for the construction of simple receivers."

Shriner, Ralph L., & Fuson, R. C. Systematic identification of organic compounds. Ed.3. 370p. 1948. Wiley, New York, $4.

Canadian chemistry and process industries, March 1948, p.248. ⅖ col.

"A text book designed to teach methods of identification of organic compounds in laboratory work . . . Increased recognition is given to the fact that the primary feature of the student's assignment is the identification of unknown compounds. However, the practice requirements on solubility determination, elementary analyses, and classification tests are retained for the benefit of students for whom they may be necessary . . . Chapter VI, entitled 'The Solubility Classes,' as well as many other sections . . . has been entirely rewritten, chiefly in the interest of increased clarity. A number

of additional classification reagents are introduced, and additional procedures for the preparation of derivatives are given."

Chemical and engineering news, May 17, 1948, p.1478. ⅝ col.

"The third edition . . . represents the natural evolution of an already outstanding book . . . Extensively rewritten, and the contents have been rearranged so that the student can start working on unknowns almost at once. The principal additions stem from the authors' obviously close contact with their courses, as well as their adaptation of new tests described in the current literature . . . The index has been improved by adding the melting point or boiling point to the name. This greatly facilitates the search for a compound in the tables where the arrangement is according to physical properties. The book has no equal in its field." *F. Y. Wiselogle.*

Sloan, Alvin. Fundamentals of engineering mechanics. 379p. Prentice-Hall, New York, $5.65.

Machine design, March 1948, p.182. ¼ col.

"Noteworthy addition to the literature on mechanics, this volume covers the elements of statics and dynamics in a concise, yet painstaking manner. The designer wishing to acquaint himself with this subject for the first time could have few better texts recommended. Discussions are extremely careful. Verbal ambiguities, so common to most engineering writing are virtually eliminated . . . Not addressed to the advanced student of mechanics. However, many engineers will undoubtedly find the general coverage useful. Of especial interest will be the discussions of the principle of virtual work and Mohr's circle as applied to moments and products of inertia."

Smith, Ernest A. Manual of dental metallurgy and non-metallic materials. Ed.6, enlarged and rewritten. 391p. 1947. Churchill, London, 16s.

Journal of the Institute of Metals, March 1948, *metallurgical abstracts,* p.318. ¼ p.

"Part I deals with the properties of all metals and alloys useful in dental practice and the methods of working and heat-treating them, and contains many hints which should prove most useful to practising dentists and dental mechanics. In addition to the dental materials dealt with in Part II, chapters are devoted to abrasive and polishing materials and also to furnaces and pyrometers . . . An excellent production and can be strongly recommended to dental students and practising dentists." *C. O. Bannister.*

Steinitz, E. W. Lubrication vade mecum. 40p. 1948. L. Hill, London, 2s. 6d.

Machinery (London), April 22, 1948, p.525. ⅛ col.

"Comprises a list of lubricants and key to code; lubrication charts, based on classification of machinery and uses; an alphabetical list of machines; and supplementary notes on specific conditions of lubrication for various types of machines. The lubricant specified for a given machine can be ascertained by locating the machine in the second section, noting the 'lubricant code number' and then turning to the corresponding entry in part one. Any machine and the relevant code number can be quickly located with the aid of the alphabetical index."

Mechanical world, April 16, 1948, p.434. ½ col.

"Although directed to the assistance of 'refiners, blenders, distributors, and users of lubricants in their various tasks,' it is the users, particularly the engineers who have to buy oil . . . [who] will find practically all the information with which they are normally concerned clearly classified and tabulated."

Stepanoff, Alexey J. Centrifugal and axial flow pumps. 428p. 1948. Wiley, New York, $7.50.

Compressed air magazine, May 1948, p.125. ⅞ col.

"Doctor Stepanoff . . . is an authority on centrifugal pumps . . . Features of . . . [his] book, which make it especially valuable to design and operating engineers, are theoretical and experimental studies of such subjects as cavitation, operation outside the normal head-capacity and speed ranges, axial and radial thrust, the effect of stuffing boxes on the critical speed of pump shafts, the control of head-capacity and brake-horse-power curves, and the pumping of viscous liquids. In addition, the theoretical treatment of impellers for centrifugal, mixed-flow, and axial-flow pumps has been reduced to a simple diagram that is applicable to all three types—serving, in a sense, as a 'Mollier Diagram' for these pumps. Considerable space is devoted to special problems of pump design and application, and numerous examples of modern pump designs and installations are given. Altogether, the book is sufficiently technical for the most exacting of design engineers, yet may be read with profit by those concerned with the practical solution of pumping problems."

Heating and ventilating, April 1948, p.128. ⅝ col.

"A scholarly treatment of the subject of centrifugal and axial flow pumps is presented . . . to acquaint the reader with the progress in the art. The author has been actively interested in centrifugal pumps since he entered the pump industry about 20 years ago . . . Covers theory, design and application. Numerous new mechanical, hydraulic, operating and economic problems have been presented with advances of knowledge concerning these types of pumps. Chapters on the Design of Mixed Flow Impellers for Centrifugal Pumps, Cavitation in Centrifugal Pumps, and Special Operating Conditions for Centrifugal Pumps were evolved from articles that were awarded first prizes by the Hydraulic Institute in annual contests."

Szent-Györgyi, Albert. Chemistry of muscular contraction. 150p. 1947. Academic Press, New York, $4.50.

Australian journal of science, Feb. 21, 1948, p.116. 1⅔ col.

"This book of the outstanding Hungarian biochemist summarizes in a most illuminating manner his laboratory's researches into the chemical and physico-chemical properties of the contractile matter of the cross-striated muscle fibril (rabbit) and into the mechanism of contraction. Though the subject under discussion is one of the most intricate problems of physiology, demanding consideration of chemical, physical, physico-chemical, colloido-chemical, and thermodynamical aspects, this book, written in an unconventional style and flavoured with good humour, makes fascinating reading . . . Though one or another of the interpretations offered may not meet with general consent, they will definitely stimulate discussion at a high level. Reference to foreign literature is incomplete

owing to the author's isolation for six years." *A. Gottschalk.*

Chemical and engineering news, May 24, 1948, p.1550. ⅜ col.

"Reviews and integrates the extensive studies carried out by the author and his associates at Budapest and Seeged since 1940. The work opens a new chapter in our understanding of the mechanism of muscular contraction; all workers in this field will welcome this book which, for the first time, brings together the material in an integrated story in convenient form . . . Interestingly written and must be read in order to obtain the benefit of the numerous ideas with which the text is replete . . . Will be invaluable to everyone concerned with problems relating to the physiology of muscle." *McKeen Cattell.*

Terman, Frederick Emmons. Radio engineering. Ed.3, revised and enlarged. 969p. 1947. McGraw, New York, $7. (Electrical and electronic engineering series.)

Electronics, June 1948, p.244, 246. 1⅓ col.

"We are dealing here with a college text that will not necessarily please everyone. It is not a handbook with a quick answer for the man who suddenly wishes to know all about a new electronic aid to navigation, nor is it a loose-leaf booklet into which one slips dope sheets on the latest equipment for the production of frequency modulation. The text as a whole has been brought up-to-date by the inclusion at appropriate points of such information as that on klystrons, magnetrons, lighthouse and traveling wave tubes. In addition, a completely new chapter has been added that describes circuits with distributed constants and serves to orient the reader on microwave phenomena." *A. A. McK.*

Proceedings of the I.R.E., April 1948, p.511. 2 col.

"The co-ordination and combination with older material of the developments that have taken place in radio engineering in the ten years since the appearance of the second edition of this well-known book is a task that might have daunted the most intrepid. The fact the Professor Terman has accomplished this in such a way that the whole is incorporated within the covers of a single volume suitable for classroom use of engineering seniors is an additional tribute to his ability as one of the foremost masters of technical exposition. This . . . editions contains an entirely new chapter on circuits with distributed constants and an expanded treatment of vacuum tubes that covers the newer microwave devices, even to the extent of a brief description of the traveling-wave amplifier . . . In general, the book is relatively free from typographical errors and slips of expression." *F. B. Llewellyn.*

Vogel, Arthur I. Text-book of practical organic chemistry. 1012p. 1948. Longmans, New York, $10.50.

Chemical age, Feb. 14, 1948, p.245. ⅛ col.

"The author . . . presents this new book on practical organic analysis, including qualitative organic analysis, to meet the requirements of students and to serve as an intermediate reference book for practising organic chemists . . . Contains . . . many diagrams, eight photographs and a comprehensive appendix which refers to the literature of organic chemistry. These and a detailed subject index complete a book which reflects principally the fruits of the very wide experience in research and teaching of the subject, and will provide a satisfactory course of study in this important branch of chemistry."

Weatherwax, Paul. Plant biology. Ed.2. 451p. 1947. Saunders, Philadelphia, $4.25.

Quarterly review of biology, March 1948, p.53. 11 l.

"Purposely scaled in proportion and treatment to a single semester course in botany, this second edition, like the first, is designed to meet the needs of the average student rather than those of the botany major. Consequently this book should, because of its simplicity of treatment, fulfil the requirements established in an elementary survey course. The fact that it is but mildly challenging will please those who comprehend with some difficulty. The few added facts and the recasting of old material hardly warrant a new edition at a time when the need for paper is so pressing." *C. P. Swanson.*

Welcher, Frank J. Organic analytical reagents. v.4. 624p. 1948. Van Nostrand, New York, $8.

Journal of the American Pharmaceutical Association, scientific edition, April 1948, p.172. ⅓ col.

"Follows the same general pattern of previous volumes and shows the same meticulous care in its preparation . . . An index of names and synonyms of organic reagents and an index of the uses of organic reagents complete the volume. A more helpful treatise on analytical chemistry than these four volumes has not appeared in years."

Petroleum processing, April 1948, p.379. ⅓ col.

"Follows the same general pattern in make-up as used in the preceding three volumes. Indices are arranged both according to reagents (including synonyms) and substances for which they can be used in analyses . . . Covers acidic nitro compounds, arsonic acids, dithiocarbamates, miscellaneous sulfur compounds, xanthates, sulfonic acids, sulfinic acids, seleninic acids, alkaloids, diazonium compounds, carbohydrates, and a number of miscellaneous natural substances and dyestuffs."

Williams, Herbert E. Cyanogen compounds; their chemistry, detection and estimation. Ed.2. 443p. 1948. E. Arnold, London, 40s. net.

Chemical trade journal and chemical engineer, March 12, 1948, p.276. ½ col.

"In the compilation and presentation of this widely scattered new data Mr. Williams has done a very workmanlike job which should materially ease the task of the chemist engaged in this field. It is rather a pity that the volume of new work to be handled has necessitated the omission of that section of the first edition which dealt with the manufacture of the cyanogen compounds . . . All chemists would probably not agree with the inclusion of urea, thiourea and their compounds among the cyanogen derivatives although, of course, urea was first made synthetically from ammonium thiocyanate. The analytical section is particularly good, Mr. Williams himself having carried out a good deal of investigation on the estimation of the ferrocyanide content of spent oxides . . . Can be fully commended to all who have occasion to delve into the chemistry of the cyanogen compounds or seek information on the less familiar members of the family."

Industrial chemist and chemical manufacturer, May 1948, p.336. 1½ col.

"The cyanogen compounds, falling in the borderland between the two subjects, are seldom dealt with at length in text-books of organic or inorganic chemistry. A monograph on the subject is, therefore, welcome to chemists as a record of the developments in this half-forgotten field. The second edition surely constitutes a record, because thirty-three years have elapsed since the first edition appeared. This long period has been bridged by the author in his comprehensive survey of the field, and anyone seeking information about cyanogen compounds will find it readily here." *A. McGookin.*

Wilson, G. Fox. Detection and control of garden pests. 194p. 1947. Lockwood, London, 12s. 6d. net. (Agricultural and horticultural series.)

Nature, March 20, 1948, p.419. ½ col.

"A good sound book on pests of the garden has long been overdue, and Mr. Fox Wilson's effort certainly fills the gap admirably . . . An expanded and revised version of the author's serial articles entitled 'Symptoms of Pest Attack on Plants' published in the *Gardener's Chronicle* during 1932-36. The basis of the book is, therefore, laid on diagnosing pest injuries, and each chapter deals with the insects or other pests of a separate part of plants . . . The photographic illustrations of damaged plants are a useful aid together with those of individual pests. While the nomenclature used for different pests is not always very modern, little confusion will result. In fact, it will prove an advantage to the general reader for the reason that it will facilitate reference to works of earlier date, since in these works the older names are current. The author has done a real service in writing this book at a time when we need to produce and conserve so much in the vegetable kingdom." *A. D. I.*

Wislicenus, George F. Fluid mechanics of turbomachinery. 613p. 1947. McGraw, New York, $7.50.

Aeronautical engineering review, May 1948, p.72. 1¼ col.

"Modern fluid dynamics and its applications to the theory of compressors, turbines, propellers, and hydraulic couplings are presented by the author, a highly successful designer and research engineer, in systematic and comprehensive treatment. Emphasis is laid upon basic aspects, which are treated rigorously, yet without unnecessary mathematical detail. Selection of the material from the large amount of specialized literature has been made with a view to the needs of the engineer in practice. Its presentation is such that the book may serve also as a text for the advanced student of engineering." *John R. Weske.*

General Electric review, April 1948, p.59. ⅓ col.

"Intended to serve as an advanced text-book as well as a reference work, this book covers adequately the theory of fluid-flow machinery in the incompressible field and offers as well considerable material on compressible flow. Consideration of practical deviations from theory is limited to hydraulic pumps, these being, as the author states, the field of his experience. Conditions for similarity and the effect of Reynolds' number are clearly stated. There is a good description of cavitation. A section on hydraulic couplings and torque converters is included, as well as as an interesting treatment of 'ducted' propellers. Beyond the simple theory, nothing dealing with turbines is contained . . . which is to be regretted, since this reviewer knows of no modern work covering theory and practice on turbines as well as this one covers pumps." *P. H. Knowlton.*

Power, March 1948, p.140, 142. ⅓ col.

"While this book cannot be considered an elementary introduction to general fluid mechanics, it does contain an explanation of those principles applying to this field in an endeavor to make this book self-contained . . . Suitable for senior and graduate engineering students, as well as engineers who are engaged in design or research on turbomachinery."

Worthing, Archie G., & Halliday, David. Heat. 522p. 1948. Wiley, New York, $6.

Journal of chemical education, April 1948, p.240. ⅝ col.

" 'Includes material appropriate for a first undergraduate course to follow an introductory course in physics and for an advanced course for college seniors and early graduate students.' Chemists and engineers study much of the material contained in this book in courses in their departments, rather than in physics. Hence, this book is one that will be especially helpful to both student and instructor because of the emphasis given to experimental methods . . . The reviewer recommends this book to all instructors, whether chemistry or engineering, whose courses discuss heat and its transformation and thermal properties. Graduate students interested in thermodynamics, and likewise men in industry, will find that this book will clarify many simple but hazy notions that they may have concerning heat and its behavior." *Kenneth A. Kobe.*

Science, May 14, 1948, p.517. ⅝ col.

"The authors have covered the field generally considered under 'Heat.' The subjects treated, with a chapter devoted to each are: Temperature, Thermal Expansion, Theory of Heat, Calorimetry, Specific Heats, Thermal Conduction, Thermal Properties of Gases, Elementary Thermodynamics, Change of Phase, Heat Engines and Refrigerators, Convection, and Radiant Energy . . . Each chapter is followed by a number of problems—over 200 in all—that well illustrate some of the principles discussed . . . A valuable feature . . . is the combination of theory, practical examples, and methods of measuring the various characteristics. There are many illustrations—about 250 in all—in this well-printed book which is remarkably free from errors. This book promises to fill a need in the field of second-year physics." *W. E. Forsythe.*

Scientific American, April 1948, p.186. ⅛ col.

"Straight unvarnished college undergraduate textbook covering laboratory procedures; temperature and its measurement; expansitivities; dynamical theory; calorimetry; specific heats; thermal conduction; thermal properties of gases; elementary thermodynamics; phase change; heat engines, refrigerators, human power plants; convection; radiant energy; tables. The treatment assumes knowledge of elementary physics and algebra." *A. G. I.*

Wray, Laurence. Electrical appliance sales handbook. 231p. 1947. McGraw, New York, $3.50.

Electrical south, March 1948, p.112. ⅓ col.

"Intended primarily for the use of the elec-

trical salesman, the Handbook covers approved selling techniques and their application to the specific problems of selling electric ranges, electric water systems and water heaters, refrigerators and home freezers, home cleaning equipment, home laundries, and various types of electrical farm equipment . . . Includes a wealth of statistical information on the operating characteristics of appliances, consumer needs and desires, and the economics of farm and non-farm electrification. Stressed throughout is the 'Go All-Electric' theme, with suggestions for meeting LP gas and other competition which would be of value to sales executives in developing merchandising and promotional programs."

Electrical world, Jan. 17, 1948, p.237. 11 l.

"A manual of sales arguments for electrical applications in the home and on the farm. Advantages of electric water heating, cooking and refrigeration over competitive methods—bottled gas and coal—are recited in detail. Electric water supply systems, food freezing, laundry work, cleaning, farm work applications, and adequate wiring are discussed at length. The appliance dealer and salesman will find in this book a wealth of selling information."

General Electric review, April 1948, p.59. ⅝ col.

"If the thousands of electric-appliance dealers throughout the country, and their sales people, would study this book and master its contents, a distinct service would be rendered to electrical manufacturers, public utilities, and consumers themselves; for it contains a wealth of data on operating costs, advantages to the housewife and farmer, and the economies that can be secured . . . Free from high-pressure sales technique and confines its sales arguments to facts and statistics. Unfortunately, even though the book presents much useful information, it is doubtful that any but a small percentage of appliance salesmen will take the time to read it. It is at times rather lengthy and involved . . . Nevertheless, the book is a useful contribution and should be on every appliance dealer's shelf." *C. F. Scott.*

Zucrow, Maurice J. Principles of jet propulsion and gas turbines. 563p. 1948. Wiley, New York, $6.50.

Automotive industries, April 15, 1948, p.85. ⅛ col.

"Said to be one of the first complete texts devoted exclusively to this subject, the book was written by M. J. Zucrow, professor of gas turbines and jet propulsion, School of Aeronautics, Purdue University. In the main it is based upon a lecture course given by the author during the latter part of the war under the sponsorship of the University of California. Intended for students of the subject, it covers the basic principles and analytical methods which should be of value to practitioners of the art as well . . . The necessary fundamental units, mathematical equations, examples and tables and illustrations are presented profusely and in comprehensive form."

Military engineer, May 1948, p.244. 1 col.

"This is a fine example of the correct way to present a treatise on an engineering subject . . . A book which will warrant careful study by all engineers interested in the field. There are few subjects of greater importance to both our national defense and to engineering development. Dr. Zucrow has written a book which is noteworthy for its straightforward organization of material. Obviously no one book can make the reader an expert in the field, but the theory here is not 'watered-down' but is presented in a manner consistent with the interested reader's further inquiry into the subject. Over 270 references are included, appearing at the end of each chapter. The many illustrations, diagrams, tables, and examples add to the usefulness of the book for reference." *F. K.*

Scientific American, April 1948, p.185. ¼ col.

"The author . . . presents a discussion of the fundamental theory pertinent to an intelligent understanding of jet-propulsion engines and gas-turbine power plants. Workings of the continuous combustion gas turbine, the three basic types of air compressors, the axial-flow turbine, the combustion chamber, high-temperature metallurgy, the turbojet engine and the rocket are all given excellent coverage . . . Contains a wealth of material for the serious student. But if it is a popularization of the subject you want, this is not your book." *N. H. U.*

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